Summary of Changes to

# KENTUCKY MINIMUM SPECIFICATIONS FOR SCHOOL BUSES

2009 Edition

1. Page 30, TIRES AND RIMS, Add:

NOTE: ALL TIRES ON A GIVEN VEHICLE SHALL BE OF THE SAME BRAND, SIZE AND LOAD RATING. RIMS SHALL PROVIDE A RIM BEAD SEAT COMPATIBLE WITH LOW PROFILE TIRES. THE MAXIMUM TIRE INFLATION PRESSURE SHALL NOT ALLOW THE TIRE RATING TO EXCEED THE RIM RATING.

NOTE: A 34 PASSENGER (SHELL SIZE) FLAT FLOOR SPECIAL NEEDS BUS MAY HAVE 245/70R/19.5, LR G TIRES ON 7.5' RIMS OR APPROVED EQUAL.

Reason for the change: This change allows local district to purchase small type C special needs bus capable of transporting up to four wheel chairs and allow the flexibility to change configuration to transport up to 18 seated passengers.

2. Page 45, EMERGENCY ROOF EXITS/VENTS, Change:

The installation of the emergency roof exits/vents shall be performed in such a manner that will not cause removal or cutting of any roof structural component. The roof exits/vents shall be equipped with an outside release and alarm switch. This alarm switch shall be wired to an audible signal located in the driver compartment. Emergency roof exits/vents shall be, ~~Specialty Roof Hatch model number 8945-0204, with gasket or~~ Transpec ~~1970 Standard Safety~~ 1175 Triple Value Series.

Reason for the change: Transpec Corp and Specialty manufacturing have merged. The new model number is the 1175.

3. Page 49, FANS (AUXILIARY), Add:

A body header mounted squirrel cage type fan, or approved equal, shall be installed on thirty-four (34) through eighty-four (84) passenger buses. This system shall be equipped with automotive type louvers that can be directed toward the driver. A single auxiliary fan shall be added to the left of the driver located to provide maximum windshield coverage. This Auxiliary fan shall be a heavy duty type, six inch (6") blades and caged with a small mesh corrosion-resistant metal guard.

Reason for the change: Adding this option helps clear the windshield on high humidity days.

4. Page 54, HEATERS, Add:

The heater hose shall be one (1) inch inside diameter. The heater hose shall be Goodyear Hi-Miler, Gates Blue Stripe or approved equal. All heater hose clamps shall be constant torque clamps. (Refer to the "NOTE" in the "CHASSIS" section). Clamps shall be torqued to the manufacturer's recommendation. The hose between heaters shall be protected by a metal raceway or conduit.

Reason for the change: Gates blue stripe meets all the same requirement as Goodyear Hi-Miler. This change encourages completion between the companies.

5. Page 55, LAMPS AND SIGNALS, Change:

The body shall be equipped with armored clearance and mid-body lamps. These lamps shall be manufactured by Grote, Weldon or Sound Off Inc., LED lamps, ~~Weldon 5050, a~~ minimum of four (4) candlepower, or prior approved equal. These lamps are to be mounted at the highest and widest position on the corners.

Reason for the change: LED lights should have a lower term cost. Down time will be reduced.

6. Page 56, LAMPS AND SIGNALS, Change:

Identification lamps shall be individually mounted, connected to the chassis headlight circuit and be activated by the chassis headlight switch relay. Lamps shall be ~~Weldon 5000~~ manufactured by Weldon, Grote or Sound Off Inc LED lamps or prior approved equal.

Reason for the change: Led lights should have a lower term cost and will reduce down time.

7. Page 56, LAMPS AND SIGNALS, Change:

The bus shall be equipped with two (2) combination stop and tail lamps, a diameter of not less than seven inches (7"), with plain red lens emitting red light plainly visible from a distance of five hundred (500) feet to the rear. These lamps shall be as high as practicable but below the window line and spaced as far apart as practicable, no less than three (3) feet. Measurements shall be taken from the lamp centers. The stoplights are to be activated by the brake switch. These lamps ~~are to be Weldon 10-10-1120, Catseye 650ST,~~ shall be Weldon, Grote, Sound Off, LED lamps or prior approved equal. If these lamps are not round they must have a minimum of thirty eight (38) square inches surface area.

Reason for the change: LED lights should have lower term cost and will reduce down time.

8. Page 56, LAMPS AND SIGNALS, Change:

Each bus shall be equipped with two (2), four-inch combination stop and tail lamps. These lamps shall be ~~–~~Weldon, Grote, or Sound Off LED lamps ~~have double filament lamp bulbs~~ and shall be connected to the brake-operated stop lamp circuit.

Reason for the change: LED lights should have a lower term costs and will reduce down time.

9. Page 56, LAMPS AND SIGNALS, Add:

The license plate shall be illuminated in combination with the four-inch LED stop and tail lamps located on the left rear or by a separate license plate illuminator provided that the illuminator is the body manufacturer's standard LED Lamp.

Reason for the change: LED lights should have lower term costs and will reduce term down time.

10. Page 57, LAMPS AND SIGNALS, Change:

All school buses shall be equipped with a skirt-mounted exterior landing area light. The upper portion of this light shall be shielded to cast light downward only. This light shall be Weldon ~~Part #9186-8652-30~~ Grote or Sound Off LED lamp. ~~or approved equal~~. (Wired through the headlight circuit)
Reason for the change: LED lights should have lower term costs and will reduce down time.

11. Page 57, LAMPS AND SIGNALS, Change:
The school bus body shall be equipped with a system of four (4) red LED signal lamps and four (4) amber LED signal lamps. Each amber signal lamp shall be located near each red signal lamp, at the same level, but closer to the vertical centerline of the bus. The system of the red and amber LED signal lamps shall be wired so that the amber lamps are energized manually and the red lamps are automatically energized (with the amber lamps being automatically de-energized) when the bus service door is open

All systems shall include a separately fused manual over ride system. Flashing lamps shall be ~~Bader Brown 2100 Series, Red 2700-140-000, Amber 2700-150-000~~, ~~Weldon 1080-1106-10 (red) – 20 (amber),~~ ~~Weldon 2100 or prior approved equal.~~ Weldon. Grote, Sound Off LED signal lamps or prior approved equal. The flasher device shall be Weldon 7000 with a flash rate of seventy (70) to seventy-five (75) c/p/m or prior approved equal. If a system controller is utilized it shall be warranted for five (5) years. All eight-way light lenses shall be easily replaceable using mechanical fasteners.
Reason for the change: LED lights should have lower term costs and will reduce down time.

12. Page 60, LAMPS AND SIGNALS, Change:
The above-mentioned lamps shall require prior approval for the Pupil Transportation Branch. All school bus bodies shall be equipped with two (2), seven-inch rear turn LED signal lamps. The lens of these lamps shall show an amber arrow, with the arrow on the right lamp pointing right and the arrow on the left pointing left. Rear turn signal lamps shall be mounted as near the outer edge of the bus body as possible. They shall be Weldon ~~1000 Series~~ Grote, Sound Off LED lamps or approved equal.
Reason for the change: LED lights should have lower term costs and will reduce down time.

13. Page 60, CROSSING CONTROL ARM, Add:
Buses shall be equipped with a crossing control arm mounted on the right side of the front bumper, which shall not open more than ninety degrees. All air brake equipped chassis shall be equipped with air operated crossing arms.
Reason for the change: Air operated systems require less maintenance than electric systems.

14. Page 61, CROSSING CONTROL ARM, Change:
Crossing control arm shall be Specialty Manufacturing Company, 6 series solid state ~~or Transpec #4000 series~~ or approved equal for hydraulic brake buses.
Reason for the change: The Transpec #4000 series is no longer available.

15. Page 61, CROSSING CONTROL ARM, Change:
If an air operated system is employed it shall require a dedicated solenoid valve and regulator ~~(SMC 16 series or Transpec 4000 series)~~(Specialty 2800 series air operated for all air brake chassis).
Reason for the change: The SMC 16 series and the Transpec 4000 series are no longer available.

16. Page 80, CONSTRUCTION, Change:
All construction material used in modification of fabrication, unless noted below, shall be equal to the strength of steel. Body joints present in the portion of the Type "A" school bus body, furnished exclusively by the body manufacturer, shall conform to the performance requirements of FMVSS 221. This does not include the body joints created when body components are attached to components furnished by the chassis manufacturer (see CONSTRUCTION, SECTION 1 PART 2). All side panels shall be the equivalent in strength to ~~twenty (20)~~ Twenty-two (22) gauge steel. Roof sheets shall be equivalent to ~~twenty-two (22)~~ twenty-three (23) gauge steel. This allows for nonferrous metal side and roof panels. All bodies shall be bow frame construction to form a "safety cage". Front and rear caps may be composite material provided they contain a metal inner liner.
Reason for the change: The current available chassis will not allow the use of 20 gauge steel without exceeding Gross vehicle weight rating.

17. Page 83, INSIDE HEIGHT, Change:
Twenty-two (22) passenger conversion vans shall have an inside height of seventy-two (72) inches at a minimum and ~~seventy-four (74)~~ seventy eight (78) inches at a maximum. Sixteen (16) passenger conversions shall have an inside height of approximately sixty-five (65) inches at a minimum and seventy-four (74) inches at a maximum.
Reason for change:

18. Page 86, DOORS, Add:
SPECIAL SERVICE OPENING, Type C Buses
There shall be a service opening for the electro-hydraulic lift, located on the right side of the bus body between the entrance door and rear wheels, subject to approval by the Pupil Transportation Branch. The door(s) shall be fastened with a positive locking device for the open and closed positions. The door(s) shall have a glass window in the upper half and shall be equipped with a device that will activate a green or red light in the driver's compartment labeled "Lift Door".
SPECIAL SERVICE OPENING, Type A Buses
There shall be a service opening for the electro hydraulic lift, located on the right side of the body behind the rear wheels. All other Requirements, with the exception of location, shall be the same as a Type C bus.
Reason for the change: The Center lift location is no longer available on type A buses.

19. Page 89, FLAT FLOOR OPTION, Add:

**FLAT FLOOR OPTION**

A 34 passenger (shell size) Special need bus may be purchased as an option. A flat floor effects bus shall be equipped with 19.5 by 7.5 inch rims and 245/70R/19.5 tires. Flat floor buses shall be equipped with full length continuous L track. A Flat floor bus shall meet all other type C bus requirements listed in Section I Parts 1 and 2 as well as Section III of this specification.

Reason for the change: This change allows local districts to purchase a small type C special need bus with maximum seating flexibility.

20. Page 93, WHEELCHAIR ANCHORS AND OCCUPANT SECUREMENT SYSTEM, Change:

All wheelchair positions shall be equipped with a "Type II" occupant protection and securing system meeting the requirements of FMVSS 209 and 210. The design of the securing system shall reference, as a standard, the SureLock, four-point wheelchair anchor part number FF612-4C-7 or Q'Straint QRT System part number ~~Q-8211-~~L Q8111-L and the physical dimensions of an Everest & Jennings manual wheelchair, Model T8A200, to determine the seating reference point and the design angle of pull of the torso belt for passenger protection between the average size six-year old and fifty-percentile adult male. Adjustable attachment points of the overhead torso belt connectors shall be identified in some manner that a prudent operator would assure achieving the design angle of pull relative to the physical dimensions of the person being transported.

Reason for the change: Q'Straint has changed its part number.

21. Page 95, AIR FOIL, Add:

**AIR FOIL**

A rear air foil may be installed by Kentucky school districts. Air foils shall be manufactured by "SEE II" Corporation, PO box 426, Darby, Montana, 59827. Air foils shall be installed consistent with OEM's installation requirements.

Reason for the change: